FIG 1

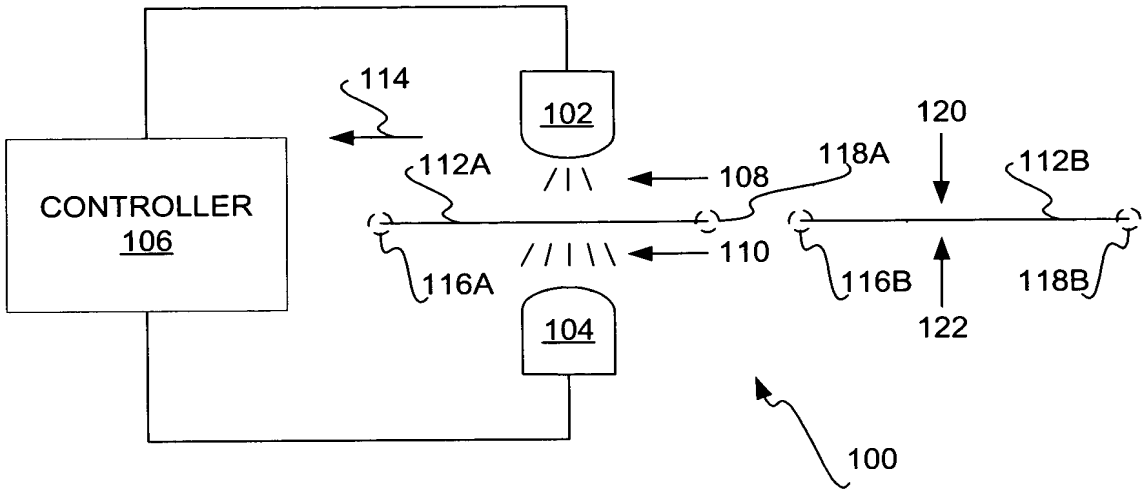
CONTROLLER
106
114
102
112A
108
118A
120
112B
110
116A
116B
118B
122
104
100

FIG 2

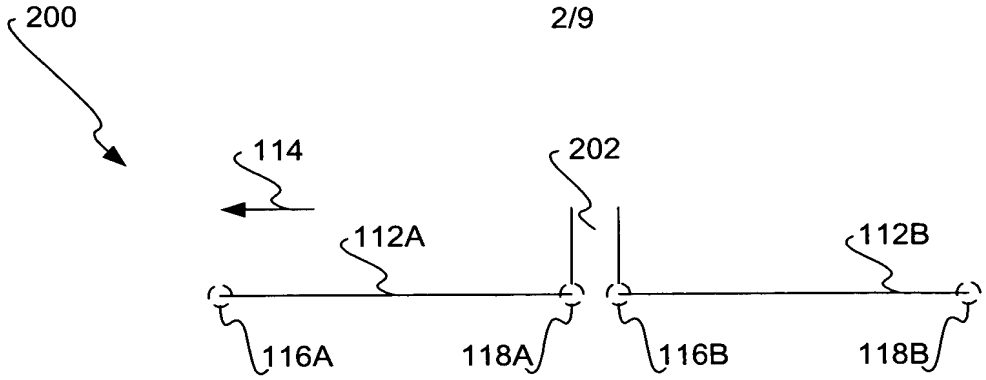
200
114
202
112A
112B
116A
118A
116B
118B

FIG 3

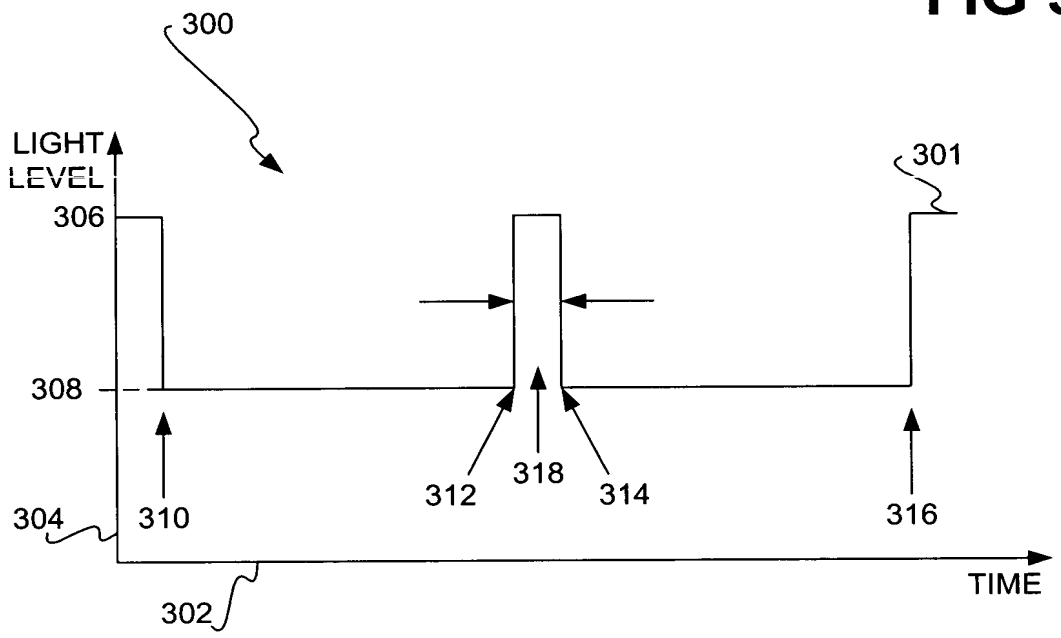
300
LIGHT LEVEL
306
308
304
310
312
318
314
301
316
302
TIME

FIG 4

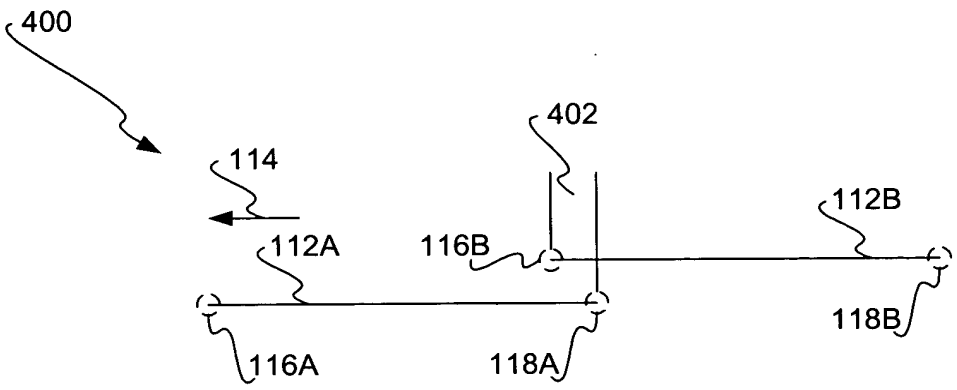
400
402
114
112B
112A
116B
118B
116A
118A

FIG 5

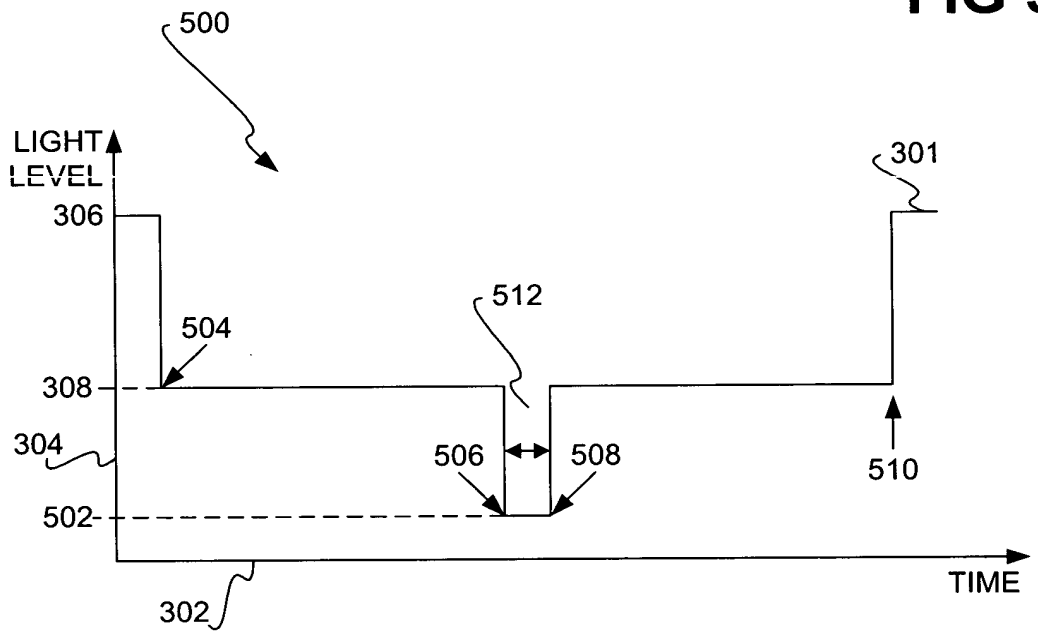
500
LIGHT LEVEL
306
301
512
504
308
304
506
508
510
502
TIME
302

FIG 6

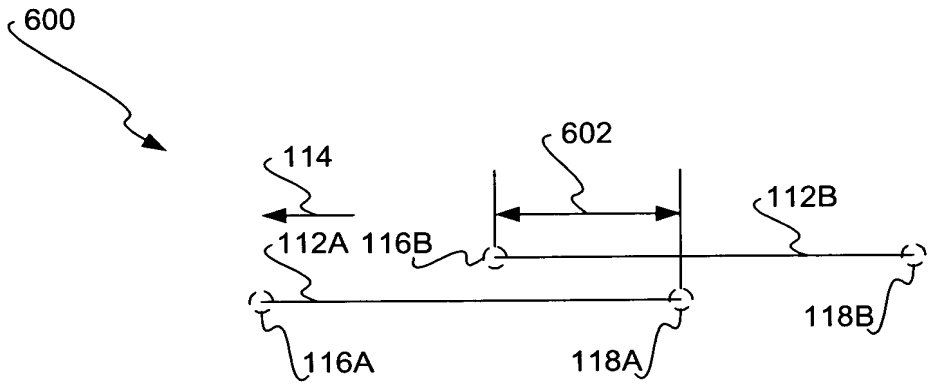
600
602
114
112B
112A
116B
118B
116A
118A

FIG 7

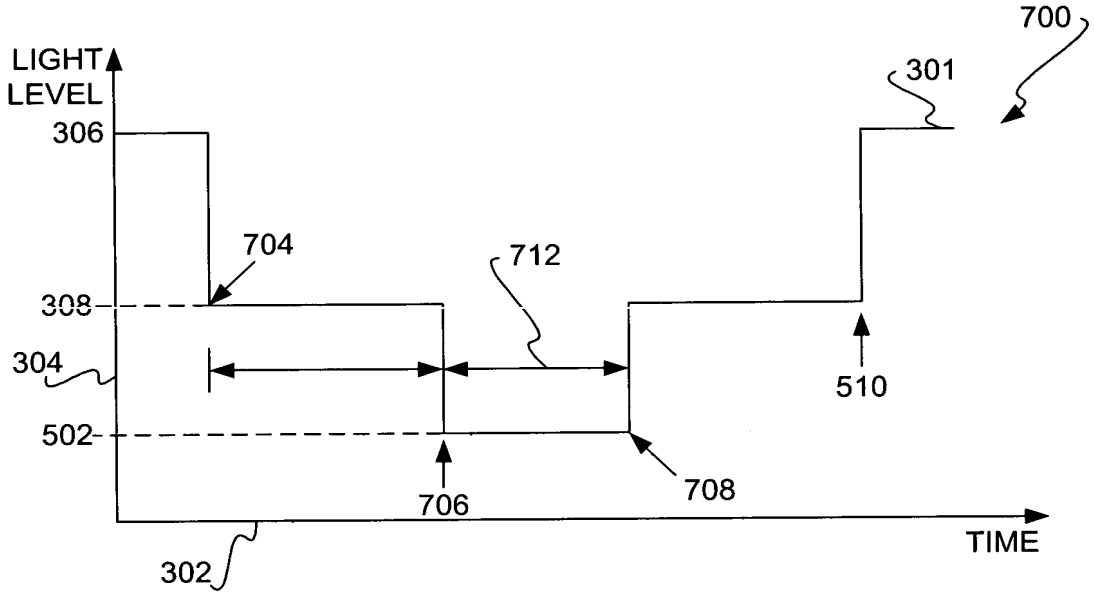
700
LIGHT LEVEL
301
306
704
712
308
304
510
502
706
708
TIME
302

FIG 8

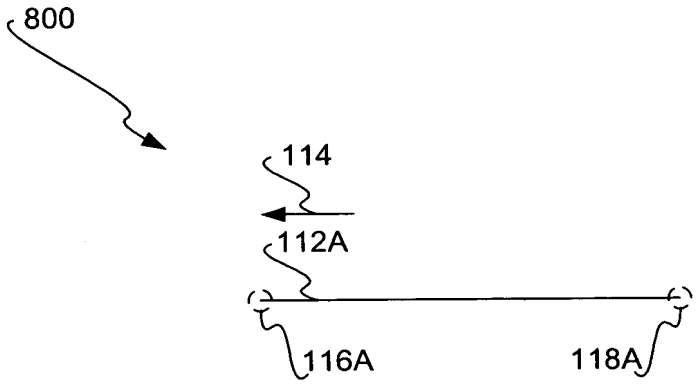
800
114
112A
116A
118A

FIG 9

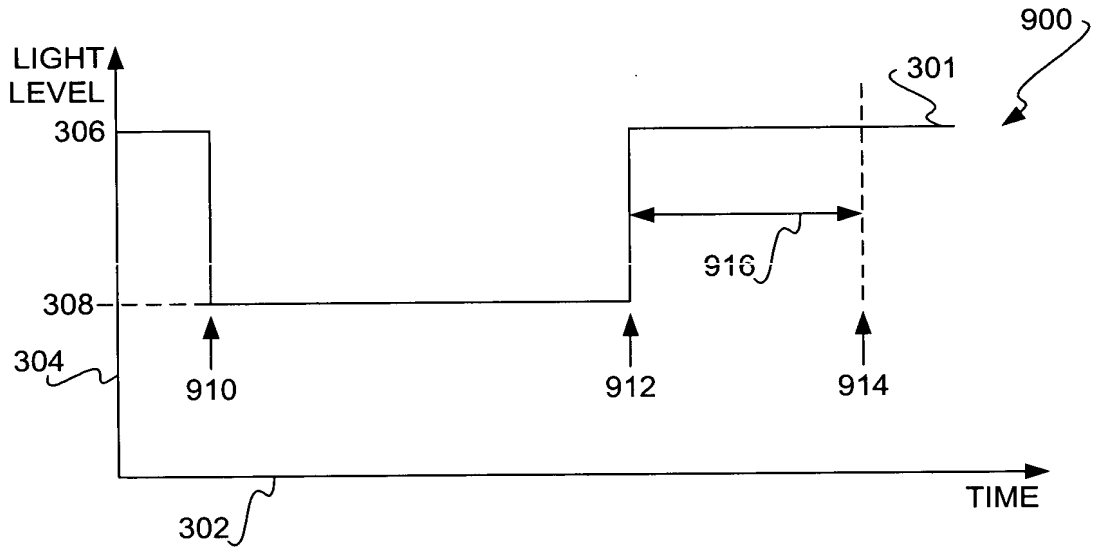
900
LIGHT LEVEL
306
301
916
308
304
910
912
914
TIME
302

FIG 10

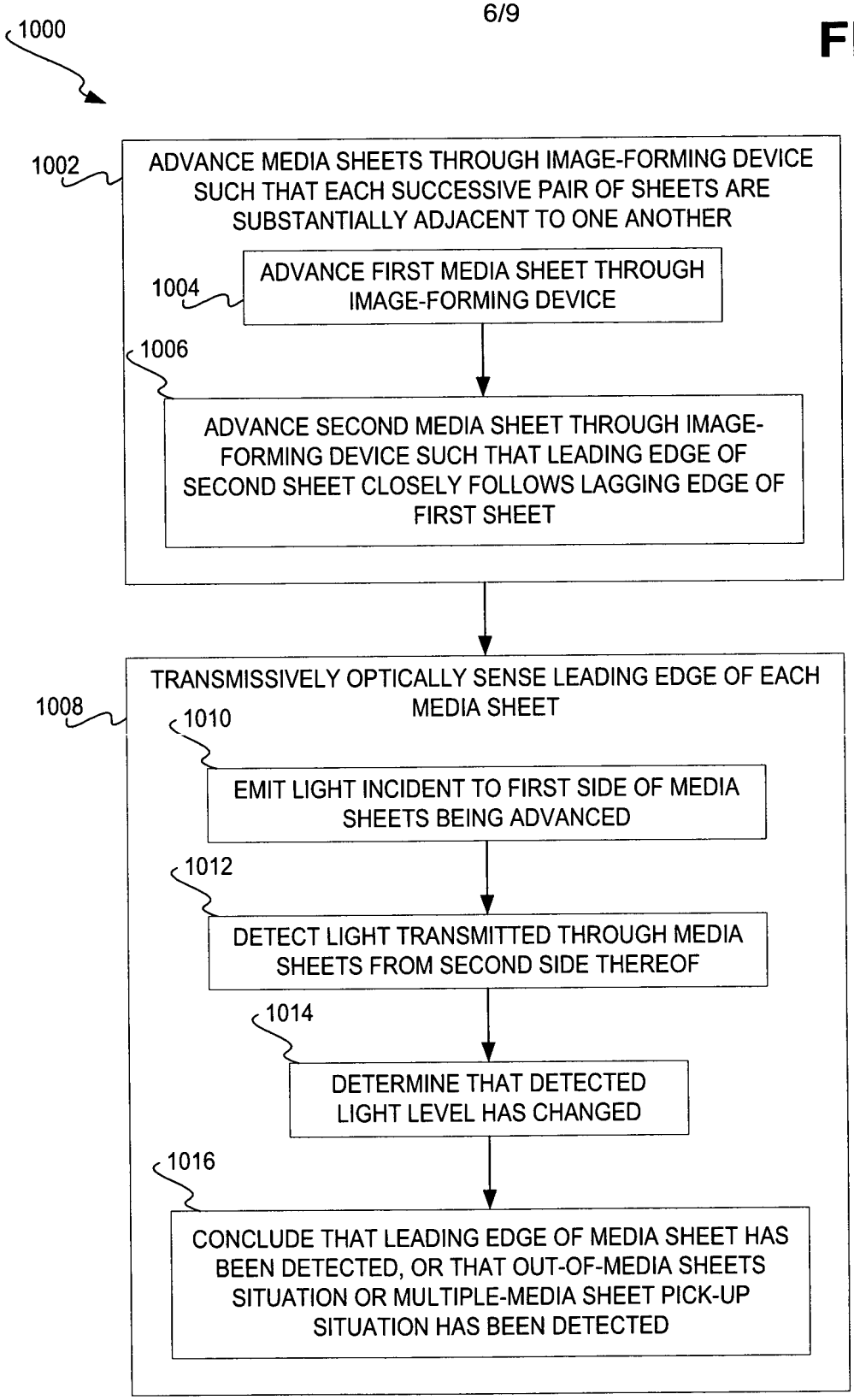
1000
1002
ADVANCE MEDIA SHEETS THROUGH IMAGE-FORMING DEVICE SUCH THAT EACH SUCCESSIVE PAIR OF SHEETS ARE SUBSTANTIALLY ADJACENT TO ONE ANOTHER
1004
ADVANCE FIRST MEDIA SHEET THROUGH IMAGE-FORMING DEVICE
1006
ADVANCE SECOND MEDIA SHEET THROUGH IMAGE-FORMING DEVICE SUCH THAT LEADING EDGE OF SECOND SHEET CLOSELY FOLLOWS LAGGING EDGE OF FIRST SHEET
1008
TRANSMISSIVELY OPTICALLY SENSE LEADING EDGE OF EACH MEDIA SHEET
1010
EMIT LIGHT INCIDENT TO FIRST SIDE OF MEDIA SHEETS BEING ADVANCED
1012
DETECT LIGHT TRANSMITTED THROUGH MEDIA SHEETS FROM SECOND SIDE THEREOF
1014
DETERMINE THAT DETECTED LIGHT LEVEL HAS CHANGED
1016
CONCLUDE THAT LEADING EDGE OF MEDIA SHEET HAS BEEN DETECTED, OR THAT OUT-OF-MEDIA SHEETS SITUATION OR MULTIPLE-MEDIA SHEET PICK-UP SITUATION HAS BEEN DETECTED

FIG 11A

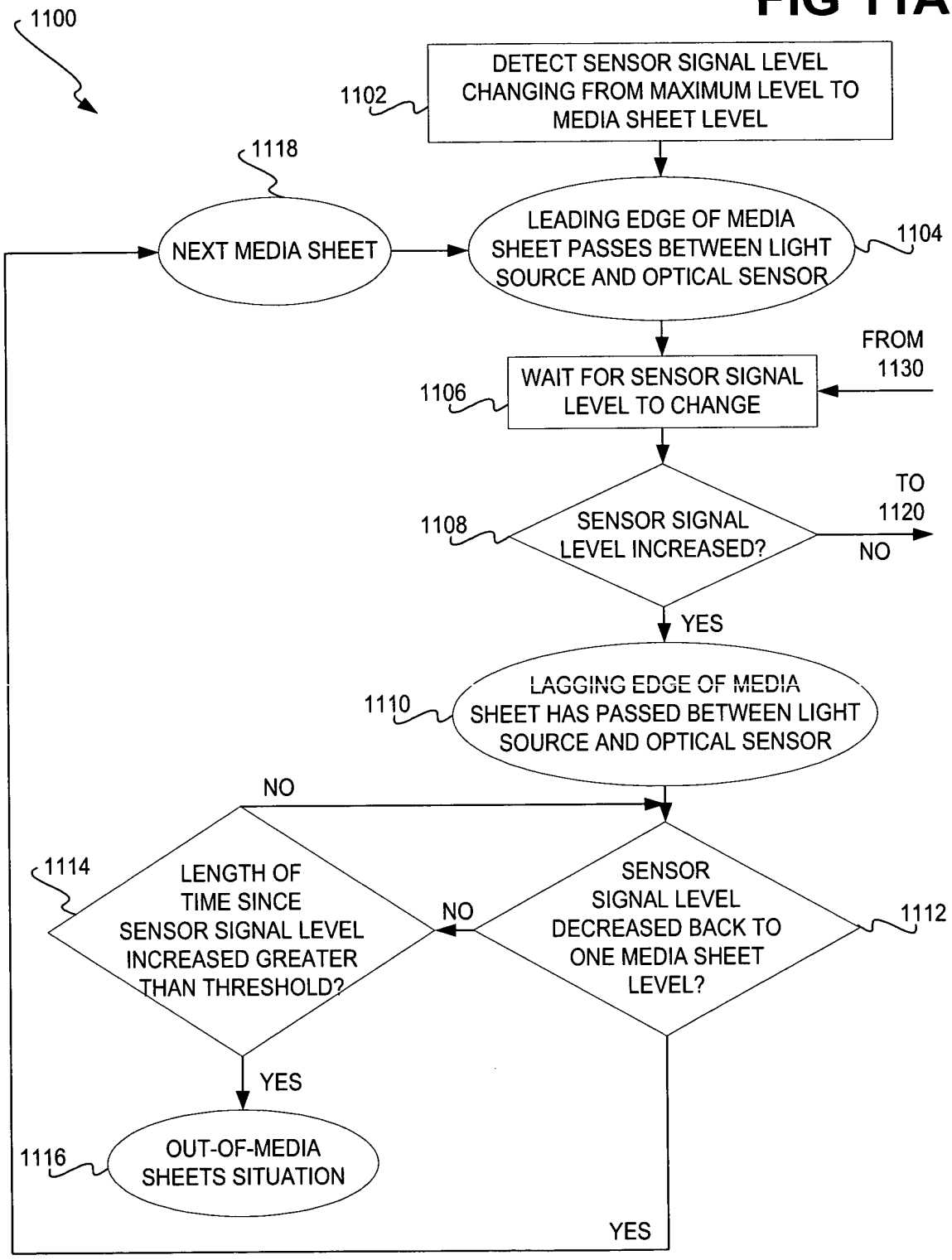
1100
DETECT SENSOR SIGNAL LEVEL CHANGING FROM MAXIMUM LEVEL TO MEDIA SHEET LEVEL
1102
1118
NEXT MEDIA SHEET
LEADING EDGE OF MEDIA SHEET PASSES BETWEEN LIGHT SOURCE AND OPTICAL SENSOR
1104
FROM 1130
WAIT FOR SENSOR SIGNAL LEVEL TO CHANGE
1106
TO 1120
SENSOR SIGNAL LEVEL INCREASED?
1108
NO
YES
LAGGING EDGE OF MEDIA SHEET HAS PASSED BETWEEN LIGHT SOURCE AND OPTICAL SENSOR
1110
NO
LENGTH OF TIME SINCE SENSOR SIGNAL LEVEL INCREASED GREATER THAN THRESHOLD?
1114
NO
SENSOR SIGNAL LEVEL DECREASED BACK TO ONE MEDIA SHEET LEVEL?
1112
YES
OUT-OF-MEDIA SHEETS SITUATION
1116
YES

FIG 11B

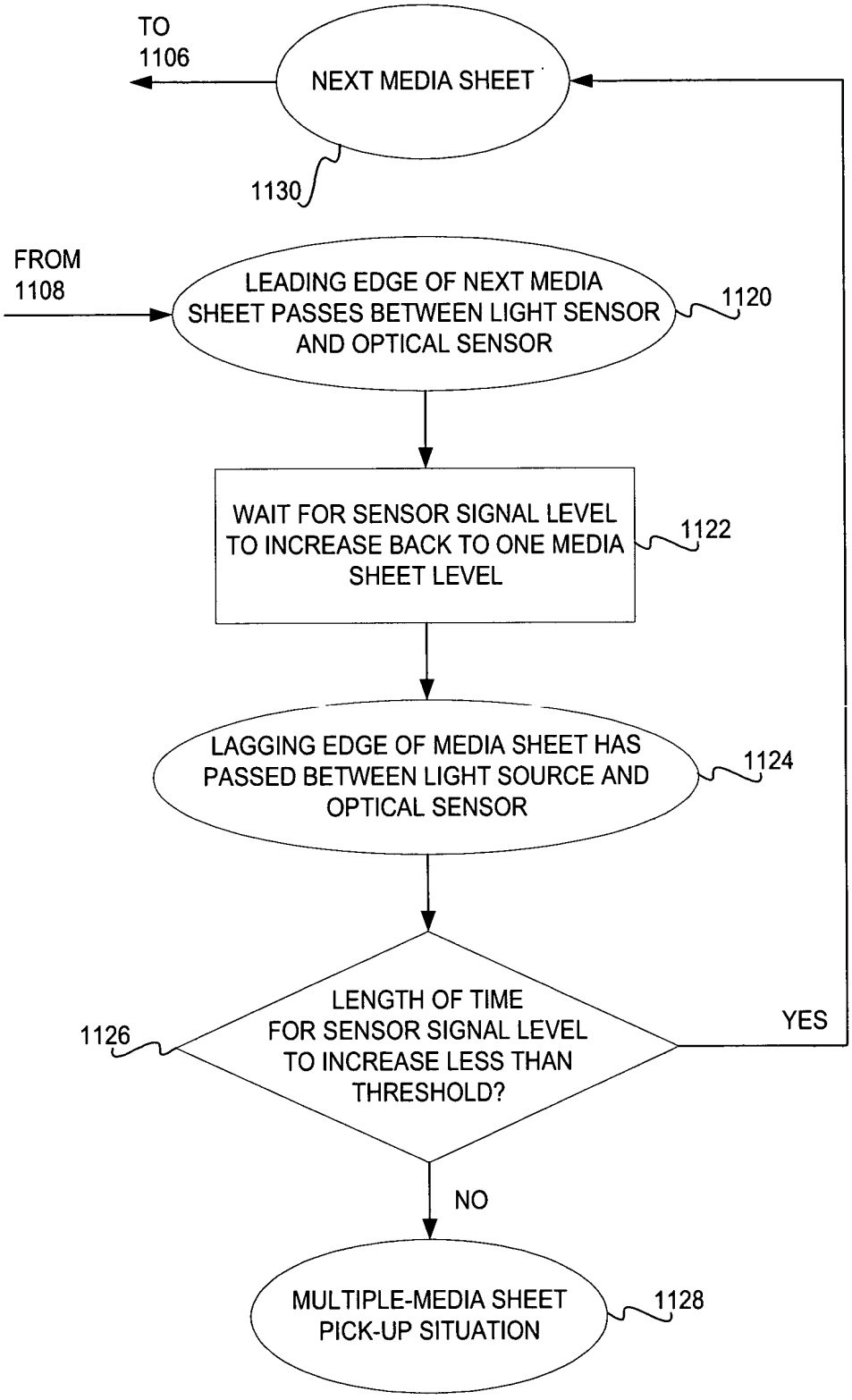
TO 1106
NEXT MEDIA SHEET
1130
FROM 1108
LEADING EDGE OF NEXT MEDIA SHEET PASSES BETWEEN LIGHT SENSOR AND OPTICAL SENSOR
1120
WAIT FOR SENSOR SIGNAL LEVEL TO INCREASE BACK TO ONE MEDIA SHEET LEVEL
1122
LAGGING EDGE OF MEDIA SHEET HAS PASSED BETWEEN LIGHT SOURCE AND OPTICAL SENSOR
1124
LENGTH OF TIME FOR SENSOR SIGNAL LEVEL TO INCREASE LESS THAN THRESHOLD?
1126
YES
NO
MULTIPLE-MEDIA SHEET PICK-UP SITUATION
1128

FIG 12

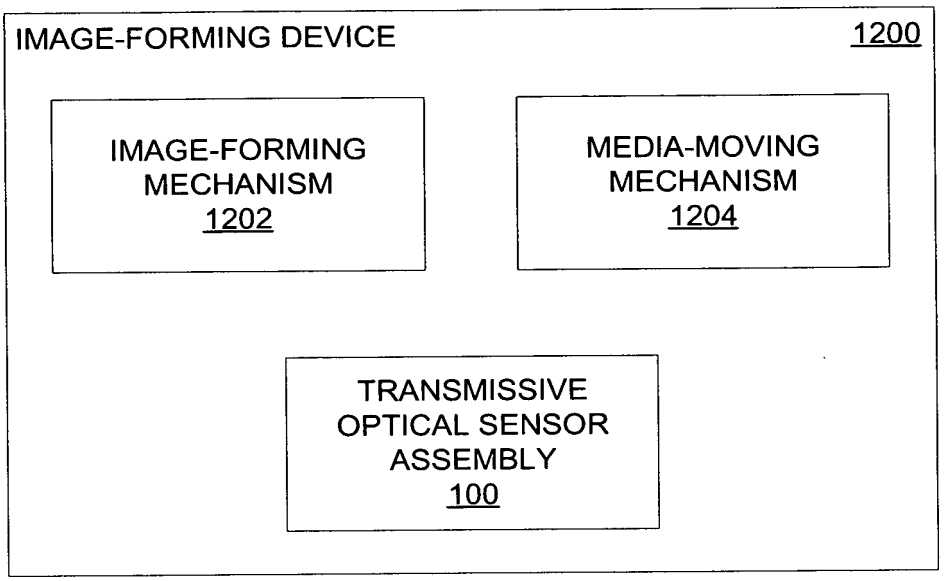
IMAGE-FORMING DEVICE
1200
IMAGE-FORMING MECHANISM
1202
MEDIA-MOVING MECHANISM
1204
TRANSMISSIVE OPTICAL SENSOR ASSEMBLY
100